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COMPARISON OF THE US AND SOVIET ECONOMIES - THE LABOR FORCE

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"Today the USSR has on farms over 45,000,000 men and women, or nearly one-half of their total labor contingent. With us the number of workers in agriculture is only aboug 10% of our total labor force, and with this force we produce about 1/3 more than does Soviet agriculture. In the industrial sector they have 20% more labor than we to produce the equivalent of about 40% of total production...

"We believe it likely that the Soviets will continue to grow industrially by 8 or 9% per year."

Excerpted from speech by Allen W. Dulles, Director of CIA, on November 13, 1959

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"In the South, last summer the head of a large, rich kolkhoz tried to convince me: 'Not so fast, for goodness sake! The productivity at our farms is low? Milk is dear? Meat too? Manual work? We can stand that! We have, as it is, so many people we do not know where to put them, so let them work.'"

Ogonek, No. 15, 1959.

The paper by Mr. Warren Eason, appended below, constitutes something of a milestone in the comparison of the US and Soviet labor forces, a subject which in the past has been largely neglected. It is therefore refreshing to find an analytical approach, which, buttressed by a wealth of statistics, appears to go far towards answering many of the recurrent questions in this field.

Useful pointers appear in table 1 (p. 15 below) where Mr. Eason has estimated the total US and Soviet labor force in two years which are both crucial in the unfolding of the 7-year plan:

	USSR	US
1960	114,800,000	73,200,000
1965	117,100,000	79,200,000

Thus by the end of the 7-year plan, the total Soviet labor force will be almost half as large again as its US equivalent. Its slower rate of expansion which is due to demographic forces is technically interesting, and the effects of it are precisely described by Mr. Eason as:

> "acclerating the reduction in the relative 'abundance' of manpower that was already taking place in the course of Soviet industrialization. At the same time it would be a mistake to exaggerate the implications or to overstate the case in terms of an overall labor 'shortage'."

These conclusions agree with those reached by Background Information in 1958. But Mr. Eason's analysis also leads him to assume that after 1950 the labor force participation rates in the USSR began to decline, and that they will continue to do so until perhaps 1975 (see p.19 below.) His reasons appear to be valid and are important. They are as follows:

> "(1) The increase in school attendance, although this would be more a case of reducing the average number of days worked during the year, since many young people (especially on farms), would continue to be in the labor force for atleast part of the year; and (2) the large scale migration of females from rural to urban areas... It can be argued that Soviet labor force participation rates may very well now begin to resemble those of other industrialized countries...

The interpretation of the educational reform (pp.25-27) by Mr. Eason is as well-founded and as carefully balanced as his study of the demographic problem. In particular attention should be paid to his remark on p. 32 below that "for all the implications of the reorganization of education, a reduction in the number of students is not contemplated." This is a considerable understatement, in that in fact the number of students is scheduled to expand rapidly during the 7-year plan, but nevertheless, its avoidance of the opposite theory, that the demographic squeeze will be overcome by the employment of schoolchildren, is analytically sound. All students of the educational reform should also take most careful cognizance of the formulation used by Mr. Allen W. Dulles on this point (p. 9 below). In discussing the ways in which labor can be found to meet the manpower targets, Mr. Dulles notes that:

"the men under arms, the surplus of people on the farms (if more efficient techniques are introduced into agriculture) and students found unqualified for advanced education are possible sources of additional manpower for industry."

Hence the director of C.I.A. does not envisage education being sacrified to industry, but industry recruiting from those who are not selected for further education. This process takes place everywhere, not merely in the USSR.

In using table 4 below, a caveat is necessary. The number of wage and salary earners in the USSR in 1965 is shown as 64,000,000 but the amended 7 year plan target is 66.5 million. Mr. Eason's lower figure is presumably due to his exclusion of collective farm tractor drivers (see note 1, table 4), but there are some grounds for believing that Gosplan has already excluded these men from its higher target figure.[1] Moreover Mr. Eason has not provided any clue as to the likely number of US wage and salary earners in 1965, probably because it must necessarily be speculative. But a very rough idea can be gained from the statement of the Monthly Labor Review (January 1959) that 6,250,000 workers will be added to the US labor force between 1960 and 1965. Thus an approximation for the US 1965 total might reasonably be about 60,250,000. In other words, as Background Information pointed out on 26 September 1958, the man-power gap between the non-agricultural labor forces of the USSR and US is growing wider, and will continue to do so in the years to come. By the end of the 7-year plan it will probably amount to somewhere between 4-6 million workers.

On p. 35 below, Mr. Eason's explanation as to why the 7-hour day (and in some cases 6) should be introduced at the time of a contraction in the usually abundant labor supply is somewhat unconvincing, but cannot be disproven. He sees the 7-hour day as an artificial means of encouraging productivity increases, and there is no doubt that this is part of the motive, but only a minor part. A more probable answer is that the growth of the labor force has outrun the expansion of the investment resources necessary for the provision of new jobs, and in some industries such as coal-mining, aircraft and armaments manufacture, the rise in output has either already exceeded the capacity of the market to absorb it, or would have done so with the old 8-hour day. In connection with this campaign for the artificial restriction of output, it is particularly interesting to note that official propaganda for the abolition of night shifts is now beginning (Izvestia, 13 November 1959). This development, which comes at a time when the British textile workers' unions are beginning to accept night shifts as a necessary evil in order to remain competitive in the face of low-cost imports from abroad, must inevitably reduce efficiency. While Izvestia's claim that productivity per worker may be increased by transferring workers from night to day shifts is no doubt well-founded, it remains true that total output per industrial-unit must fall off as the night shifts begin to wither away, since the machinery will be in use for a smaller

[1] See Izvestia, 14 July 1959. The number of workers and employees is given after deducting those transferred to kolkhozes.

proportion of the week.

To return to demography, however, it is noteworthy that at the end of 1959, after two years of increasing demographic squeeze, few responsible observers would now dispute Mr. Eason's statement that:

"given the desirability of reducing hours reasonably soon on other grounds, the demographic factor is not a particularly strong argument against doing it now."

r.r.g.

STATEMENT BY ALLEN W. DULLES

To the Subcommittee on
Economic Statistics of the
Joint Economic Committee
of the Congress of the United States
November 1959

Few subjects arouse more heated controversy than that which your committee is studying; namely the comparison of the economies of the United States and the Soviet Union.

There are proponents of the view that the Soviet Union is relatively backward. There are others who picture it as a galloping giant which exceeds us not only in its present speed but in staying power.

In the Central Intelligence Agency we devote a major effort to the analysis of this problem. We gather together the best technicians available, in and out of Government, to advise us on the various aspects of the Soviet economy - from agriculture on one hand to the most sophisticated technical and military items on the other. We have a great mass of evidence to weigh. We try to do it without prejudice.

We have also carefully reviewed the papers which your committee has already received and published. You are to be congratulated on the general excellence of these studies.

There are many reasons for the divergence of views among experts. A great deal depends upon the particular sector of the Soviet economy that is under study.

The Soviet Union is extremely proficient in certain areas, especially in the scientific and technological fields related to its military effort. In other areas which up to the present time the Soviets have considered secondary, their performance ranges from fair to mediocre.

In some important areas, particularly agriculture, their efforts have been hampered by the tendency to impose on the tillers of the soil some of the precepts of Marx through the system of collective farms and rigid state control. Such ideological considerations, in recent years at least, have not hampered their progress in the field of science and technology.

Returning American experts after visiting the USSR reflect these contrasts. Those experts who have concentrated their study on Soviet achievements in the fields of steel production, heat resistant metals, electronics, aeronautics and space technology, atomic energy, machine tools, and the like, come back with the general finding that the USSR is highly competent.

On the other hand those who have studied what the Soviets are doing in agriculture, roadbuilding, housing, retail trade, and in the consumer goods field, including textiles, find them lagging far behind us. Some recent returning visitors to the Soviet Union remarked with surprise that they can send a Lunik to the moon, but don't bother to make the plumbing work.

This is a crude comparison but does help to illustrate where Soviet priorities lie.

The lag I have mentioned, does not reflect Soviet inability to do these particular things. It does evidence a definite decision to defer them to the higher priority objections of industrial and military power and an unwillingness, at this time, to devote the funds and manpower necessary to the modernization of production equipment in the consumer goods field.

At first blush, one might conclude that the USSR was a country of contrasts but this is only superficially true. It is a country of concentration - concentration on those aspects of production and of economic development which the Soviet leaders feel will enhance their power position in the world. Theirs is a materialistic society. They assign a low priority to those endeavors which would lead to a fuller life for their people.

The attitude they take toward automobiles is a good illustration of this policy. Mr. Khrushchev was undoubtedly impressed by the view he gained of our overall economic strength. He was by no means persuaded that he should emulate us in the automotive field. In an address at Vlaivostok about a month ago, he said that it was,

> "not at all our aim to compete with the Americans in the producing of a large number of cars..We shall produce many cars but not at the moment. We want to set up a different system for the use of cars than the one in capitalistic countries... Cars will be used in our country more rationally than is done by the Americans. Common taxicab parks will be widely developed in our country, where people will take cars for essential purposes."

He did not add, but it does cross one's mind, that his system also gives the regime a better chance to maintain its control over the people.

In effect Khrushchev is also implying that he does not propose to divert to car production resources which could contribute to build up heavy industry and military strength.

Another illustration of the Soviet ability to concentrate and allocate resources for the greater power of the State is in the use made of highly skilled manpower including scientists and technologists.

Once they have determined upon a high priority project - and they have fewer echelons of decisions to surmount than we before the final go-ahead is given - they are able to divert to this project the needed complement of the ablest technicians in the USSR which the particular task demands. They can also quickly allocate the necessary laboratory or factory space and manpower required. Today although their overall resources are far less than ours, they can allocate what is necessary if the priority is high enough.

They cannot do everything at once and they do not work on as many competing designs as we. But in many of the technical and military fields the leadtime from the drawing board to the finished product is less with them than with us. This seems to be true despite the fact that generally speaking the technical

competence of our labor, man for man, exceeds theirs.

Furthermore, our military production program is in competition as respects brains in the planning, and brawn in the production, with the requirements for the manufacture of consumer goods. In the Soviet Union this type of competition now can be suppressed

The Soviets are also quick to review industrial and military programs when they find them inconsistent with their overal goals or too costly in terms of money or manpower. In 1956 they advertised widely a program in the field of nuclear power for industrial and peaceful purposes, of 2,500 megawatts to be achieved in 1960. Gradually they have screened this down to a point less than 30% of their initial goal. Apparently they found it too costly for what they are achieving. whether in terms of electric power or in terms of its propaganda value.

While they keep as secret as they can, the details of their military programs and progress, Mr. Khrushchev did tell us that heavy bombers should be consigned to museums and that he is generally turning from bombers to missiles. The evidence tends to bear out a change in policy here as well as in naval construction where the building of cruisers has apparently been halted.

While we know a great deal more about their overall military programs than the Soviet tells us, their screen of secrecy makes it difficult to estimate with precision the exact percentage of the Soviet GNP which it absorbs. We estimate, however, that with a Gross National Product (GNP) of about 45% of ours - computed on the same basis as we compute our own - their military effort , in terms of value, is roughly comparable to our own - a little less in terms of hardware produced but substantially more in terms of manpower under arms. Military hardware comes out of the most efficient sector of their economy.

With respect to the productivity of Soviet labor generally, the comparative picture is very different. Today they have on the farms over 45 million men and women, or nearly one-half of their total labor contingent. With us the number of workers in agriculture is only about 10% of our total labor force and with this force we produce about one-third more than does Soviet agriculture. In the industrial sector they have 20% more labor than we to produce the equivalent of about 40% of our total production.

It is the task of this subcommittee, I understand, to reach some conclusions regarding the present strength of the Soviet economy, its past rates of progress, and its prospects for future growth. With these introductory remarks on the general background of the Soviet economy and its overall objectives, I will turn to the particular subjects of your inquiry.

The year 1913 is taken as the base for many Soviet studies and claims. The Soviets try to picture pre-revolutionary Russia as the economic counterpart of Black Africa today. The official myth about the relative backwardness of Imperial Russia has been deliberately created so that communist economic achievements will appear to be even greater than in fact they have been. The Soviet party line would have you believe that Russian industrial output was less than 7 per cent of that of the United States in 1913.

Recently the dean of Soviet economists, Academician Strumilin, published a pamphlet which deflated official communist claims. He calculated Soviet 1913 output at between 11 and 12 per cent of that of the US. Having passed his 80th birthday, Strumilin undoubtedly felt it was time to write objectively.

The weight of evidence, as I see it, would place pre-revolutionary Russia as the sixth or seventh largest industrial power of its time, though relatively backward by then existing Western European standards of per capita output.

Further, Russia had in hand many of the keys for rapid economic development which were, of course, taken over by the communists after 1917. For example, its agricultural output in 1913 was not only able to provide an adequate diet for its people, but also to generate an export surplus. There was no pressure of population against food resources.

The country was richly endowed with coal, iron ore, petroleum deposits and other essential industrial materials. For example Russia accounted for about half the world's population of petroleum in the early 1900's . After the subsequent major discoveries in the United States, Russia's relative position declined, but in 1913, she was still a major world oil producer. Even in 1913 Russian had a modest but growing machine building industry, a well developed rail transport net, a supply of technical talent and a tradition of excellence in pure science and mathematics.

So much for what existed prior to the communist takeover in 1917. The first major problems that faced the revolutionists were political and military - to get Russia out of the war with Germany, to bring internal civil war to a successful conclusion, and later to resolve the battle for control within the Communist Party itself which followed the death of Lenin. This took the better part of a decade. By 1928, three important developments had taken place:

First, Stalin had emerged as the absolute victor in the internal power struggle.

Second, the economy had then been restored to its 1913 level of output , and

Third, out of the murky materialistic dogma of Marxism and Leninism, the surviving Communist leadership had molded a program of economic action which remains in force today.

The central theme of this program is forced draft industrialization.

Having determined on this objective the Communist leadership proceeded to implement their decision through the mechanism of detailed plans, rigid allocation of resources, and the use of force where necessary.

In the short space of 30 years, from 1928, despite the ravages of four war years and several years of reconstruction between 1941 and 1950, the Soviet Union has become second among the world's industrial powers. There is no dispute on this point.

Furthermore, in reviewing the various studies of Western scholars, I have been struck by the substantial agreement on the rate

of industrial growth achieved by the Soviet Union over the period since 1950. The range of estimates is from 9 to 10.5 per cent ayear.

The findings of a study given you by the National Bureau of Economic Research, appear on the surface to be an exception. This exception, in my opinion, is more apparent than real. The NBER study covers civilian production only, whose annual growth is placed at 7.7 per cent for the period 1950-1955.

The most important difference between the National Bureau's figure of 7.7 per cent and our estimate of about 10 per cent is due to our inclusion of military production which looms large in the overall production figures. The addition of military equipment to the National Bureau's index would tend to raise it into the range I have indicated.

Virtually all Western measurements point to this conclusion - that Soviet industrial production has been growing at a rate of at least twice as rapdily as that of the United States since 1950.

In reaching this and other comparative figures of industrial production, we have adjusted Soviet data to make them comparable to our own, and have included in industrial production the output of all manufacturing and mining industries, as well as public utilities.

Turning from industrial production to a more comprehensive, but in many ways less significant, measure of economic growth, namely gross national product, we find similar parallels between the CIA and independent private studies of the Soviet economy.

We estimate the growth of the Soviet GNP during the present decade, 1950-1958, to have been at an annual average rate of about 7 per cent measured in constant prices. Estimates by others for similar time periods range from a low of 6 per cent to a high of 9 per cent. The degree of agreement is perhaps even closer than this range would indicate since these estimates have varying initial and terminal dates within the decade. The conclusion, then, is that Soviet GNP has also been growing twice as rapidly as that of the US over the past 8 years.

Some observers have noted that, in the past, the United States experienced long-term rates of growth comparable to the Soviet achievement from 1913 to the present. Such rough statistical equality would be true, for example, if the four decades of US growth ending with our entry into World War I were selected for comparison. Those who would play down Soviet achievements would leap from this statistical springboard to the conclusion that there is nothing unique about Soviet industrial progress. Indeed, they say, we did it ourselves at a "comparable stage of development in the United States."

Such conclusions omit mention of the uniquely favorable conditions that stimulated our growth prior to World War I. Such factors include the massive immigration of European workers, the influx of investment funds to make possible our rapid rate of industrialization, and the low level of defense expenditures. The point is not only that these factors no longer exist in the United States, but also that they never existed for long in the Soviet Union.

Let me illustrate this interpretation of history with another case. The National Bureau study estimates Soviet annual industrial growth from 1913 to 1955 at 3.9 per cent. We have not felt that the years from 1913 to 1928 were helpful in forecasting the future. These years for the USSR were marked by wars, internal and external, by political upheaval, mass imprisonment and chaos. By 1928 they were about back to the 1913 level. For example, Soviet steel production in the USSR in 1913 was a little over four million tons; by 1928 it was still just a little over four million tons.

If the first 15 years are eliminated, as we believe they should be, and growth is measured from 1928 through 1958, the conclusion is inescapable that Soviet economy has surged forward very rapidly indeed. The rate was faster than for American industry over these years, despite the effects of World War II, which stimulated industrial growth in the United States but was a disaster for the USSR.

But let us not forget that the West did the pioneering. Soviet industrial development was built upon, and profited from, the technology already developed by the West from the days of the industrial revolution.

The statement, frequently made, that much of postwar Soviet growth came from looting plants in Manchuria and East Germany, does not stand up if closely examined. The early rehabilitation of war-damaged Soviet manufacturing plants was aided by these forced imports; the total benefit, however, was small compared with wartime losses.

Espionage and the reliance on outside technical experts, particularly German, is also alleged to have been of crucial importance to Soviet industrial success since World War II. In a few key industries of military signficance, most particularly in atomic energy and in the field of ballistic missiles, this had some importance in the very early stage of Soviet postwar development, but looked at in the perspective of Soviet industrial military growth as a whole, and their present competence in both the ballistic and nuclear fields, these factors played a relatively minor role. They have gained much more in the overall industrial field from the acquisition and copying of advanced western models of specialized equipment.

Turning from the past to the future, we have not attempted to distill a "best estimate" of future Soviet prospects for economic growth out of the vagaries of 30 or 40 years of Soviet history.

We have asked ourselves three questions:

First, what have the Soviets shown a capacity to do under present prevailing conditions?

Second, what do the Soviet leaders intend to do, and

Third, what are the Soviet's prospects for the achievement of their goals, assuming there are no intervening catastrophes, such as war, famine and the like.

As to the first point, Soviet performance on past plans, particularly postwar, has been relatively good. The fourth five-year plan, 1946-50, was fulfilled well ahead of schedule. The goals of the fifth five-year plan were more than met. The sixth five-year plan was abandoned early in its life. It soon was apparent that it was too ambitious. In contrast, the seven-year plan, 1959-65, was more carefully drawn and is a reasonable blueprint of attainable growth. Experience teaches us that Soviet industrial plans should be taken seriously.

With respect to their intentions, the Soviet leaders have left no room for doubt. The obsession with overtaking the U.S. economy in the shortest possible historical time was the dominant theme of the 21st Party Congress, held last February.

It continues to be so.

Mr. Khrushchev's words to the congress were:

"The Soviet Union intends to outstrip the United States economically...to surpass the level of production in the United States means to exceed the highest indexes of capitalism."

Visitors to the Soviet Union report the slogan, "Even America must be surpassed," painted on the cow barns throughout the country.

The USSR is now in the opening stages of the seven-year plan, which blueprints industrial developments through 1965. This plan establishes the formidable task of increasing industrial output by 80 per cent over seven years. The achievement of this goal will narrow the present gap between Soviet and United States industrial output.

This would be particularly true in the basic-raw-materials and producers-goods fields.

In our judgement, these goals can be met, with certain exceptions. Past Soviet economic growth has rested largely on the plowing back of every possible ruble into heavy industry, into the means of production. It is the use of steel to make steel capacity greater, rather than to use it up by manufacturing automobiles, for example.

The magnitude of the investment program in the seven-year plan, the plan that runs through 1965, is impressive by any standards of comparison. Capital investment in Soviet industry for the year 1959, the initial year of the plan, when measured in dollars, will be approximately equal to industrial investment in the United States this year. The Soviets plan proportionately larger investment outlays for the succeeding years through 1965.

These absolute amounts of investment are being fed into an industrial system whose output in 1958 was only about 40 per cent of the United States. Under such forced-draft feeding, the Soviet industrial plant should grow at a rapid rate.

On the other hand, we see no prospect that the agricultural goals of the seven-year plan will be approached.

The dramatic increase of 7 per cent per annum achieved over the 1953-58 period was the result of a six-year effort to raise agriculture out of the trough in which Stalin had left it. A variety of factors, including increased inputs of resources, most efficient use of resources, and at least two unusually good weather years, contributed to this record growth.

We estimate, however, that these resource and efficiency gains will not be repeated in the present plan period.

Given average weather, net agricultural output will probably not increase under the seven-year plan more than 18 to 20 per cent by 1965. Such a modest growth is well below the implied planned growth of 55 to 60 per cent.

Of course, the regime may be stimulated to undertake drastic new programs or new resource commitments not presently planned. Because the agricultural sector of the Soviet economy in the past has been its least efficient component, we do not reject the possibility of more improvement than we at present forecast.

Apart from the problem of agricultural growth, the Soviet under the present seven-year plan will be forced to cope with certain foreseeable difficulties, in addition to the unpredictable -- such as acts of God and the uncertainties which might attend possible policy changes incident to any new management in the Kremlin. While these foreseeable problems are significant, we believe their impact is more likely to place a ceiling on the Kremlin's ambitions for overfulfillment rather than to threaten the success of the plan itself.

Among these foreseeable hurdles are the following:

First, due to the lower birth rate during the war years, there is an obvious gap between the 1958-65 increase in the number of persons in the working age group, 15-59, and the labor-force increment necessary to meet the planned goals. The regime has recognized this problem and is taking steps to fill the gap. The men under arms, the surplus of people on the farms -- if more efficient techniques are introduced into agriculture -- students found unqualified for advanced education are possible sources of additional manpower for industry.

Second, the metallurgical raw-material and the energy industries, which were slighted in the rapid expansion of the 1950-56 period, may now be brought into balance with the rest of the economy. These former stepchildren will be receiving about half of all industrial investment under the seven-year plan.

This pattern of concentration of investment means that other industries which contributed much to growth in the recent past will no longer make the same relative contribution.

A third limiting factor on the seven-year plan goals will be the need for a vastly increased housing program and the claim on construction resources for this purpose. It must compete with higher "priority" "material strength" requirements in the industrial-condstruction sector. It will call for improvement over past performance in completing construction of industrial projects with the time and funds allotted.

Fourthly, the regime faces a complexity of problems in its attempt to increase its automation and mechanization programs.

Finally, as we have already suggested, the Soviet leadership will have difficult decisions to reach in dealing with the popular demand for more consumer goods. We believe that they now estimate that they can get away with a slight gradual improvement, which will be highly publicized and probably exaggerated. This happened in the case of the decree of a few days ago promising some additional consumer goods.

If, however, the popular demand should greatly increase and the Soviet leaders made very substantial concessions in this field, it would affect the seven-year plan goals.

Primarily because agricultural growth will be slower than in the recent past, we project a moderate slowdown in the rate of total Soviet output, or gross national product, over the next seven years, compared to the past seven years.

However, even so the USSR will achieve significant gains by 1965 in its self-appointed task of catching up with the United States, particularly in industrial production, and should substantially meet the industrial goals of the seven year plan.

Thus, we estimate that Soviet GNP will grow at the rate of 6 per cent a year through 1965, and, even, assuming that the United States gross national product for the years 1956 through 1965 can be increased to an annual growth rate of from 3.5 to 4 per cent, our best postwar growth rate, then Soviet GNP will be slightly more than 50 per cent of ours by 1965, and about 55 per cent by 1970.

I would emphasize that we must increase our recent rate of growth, which has been less than 3 per cent over the last six or seven years, to hold the Soviets to such limited gains.

In the industrial sector the race will be closer. We believe it likely that the Soviet will continue to grow industrially by 8 or 9 per cent a year.

If they do so, they could attain by 1970 about 60 per cent of our industrial production, provided

our industrial growth rate averages 4 1/2 per cent per annum, Any decrease in this rate would, of course, narrow the gap. For example, if our rate were to average the 2 per cent which Khrushchev believes is the best we have in us by 1970 the Soviets' industrial production would be more than 80 per cent of ours, if they maintain the rate of growth forecast. At the same time as we take note of Soviet progress, there is no reason to accept Soviet exaggerations of their prospects in the economic race.

In the propaganda surrounding the launching of the seven-year plan, Khrushchev made a number of statements about Soviet economic power which were nothing more than wishful thinking. Specifically, he stated that:

"After the completion of the Seven-Year Plan, we will probably need about five more years to catch up with and outstrip the United States in industrial output."

"Thus, " he added, "by that time (1970), or perhaps even sooner, the Soviet Union will advance to first place in the world both in absolute volume of production and in per capita production."

From other evidence before us we do not believe that Mr. Khrushchev left the United States with any such illusion.

First of all, to reach such improbable conclusions, the Kremlin leaders overstate their present comparative position. They claim [illegible] industrial output to be 50 per cent of that of the US. It is in fact nearly 40 per cent. Also, as I have mentioned, this is predicated on Khrushchev's forecast that our growth will be only 2 per cent a year, which is wholly unrealistic.

Another of Khrushchev's promises to his people is that they will have the world's highest standard of living by 1970. This is a gross exaggeration. It is as though the shrimp had learned to whistle, to use one of his colorful comments. Although year by year since 1953 the Soviets have been continually raising the level of production of consumers' goods, their consuming public still fares very badly in comparison with ours. This is true not only in quality and quantity of their consumer goods, but particularly in the hours of labor needed to purchase comparable products.

Last year, for example, Soviet citizens had available barely one third the total goods and services available to Americans. Indeed, the per capita living standard in the Soviet Union today is about one fourth that being enjoyed by our own people.

The Soviet government last month announced the program for increasing the production of certain durable consumers' goods, which I alluded to above. The degree did not mention automobiles, but included refrigerators, sewing machines vacuum cleaners and the like.

Actually, the new program covers only about 5 per cent of Soviet industrial production, and even in this narrow area raises goals but modestly above previous plans. The decree is one of a series introduced to provide a trickle of further benefits to the consumer at relatively small cost to the state. This does not mean that Soviet industrial investment or military programs need to be reduced.

There is another economic area where the world has been treated to propaganda statements by Khrushchev. Lat February he claimed, and has since repeated many times, that the Soviet camp "now accounts for over one third of the world's industrial output", and will produce over half of the total world industrial output by 1965."

Actually, total industrial production of the "socialist camp" - the USSR, the European satellites and Red China - is only about 25 per cent of total world output. By 1965 it will be a few percentage points higher, but free world production will still account for over 70 per cent of the total.

To summarize and conclude:

1. The communists are not about to inherit the world economically. But while we debunk the distortions of their propaganda, we should frankly face up to the very sobering implications of the Soviet economic program and the striking progress they have made over the last decade.

2. The fulfillment of the present Soviet Seven-Year Plan is a major goal of Soviet policy. Khrushchev and the Kremlin leaders are committed to it and will allocate every available resource to fulfill it. The present indications are that Khrushchev desires a period of "coexistence" in which to reach the objectives of this plan.

3. Future economic gains will also provide the goods and the services needed to further expand Soviet military power, if they choose so to use it, and to carry forward the penetration of the uncommitted and the underdeveloped nations of the free world.

The gains will also permit the Soviet to further assist in the rapid economic growth of the Kremlin's eastern ally, communist China, if Soviet policy considerations dictate such a course.

4. If the Soviet industrial growth rate persists at 8 or 9 per cent per annum over the next decade, as is forecast, the gap between our two economies by 1970 will be dangerously narrowed unless our own industrial growth rate is substantially inoreased from the present pace.

5. The major thrust of Soviet economic development and its high technological skills and resources are directed toward specialized industrial, military and national-power goals. A major thrust of our economy is directed in the production of the consumer-type goods and services which add little to the sinews of our national strength.

Hence, neither the size of our respective gross national products nor of our repsective industrial productions is a true yardstick of our relative national-power positions. The uses to which economic resources are directed largely determine the measure of national power.

COMPARISONS OF THE UNITED STATES AND SOVIET ECONOMIES:

THE LABOR FORCE

By Warren W. Eason
Princeton University
Papers Submitted by Panelist appearing before the Subcommitte on Economic Statistics, Joint Economic Committee of the US Congress +

A comparison of two countries such as the Soviet Union and the United States in the matter of a vital component of total economic activity such as the "labor force" raises many fundamental questions. On the one hand, there are the "statistical" questions, of definition and concept, and of the reliability, comparability and meaning of various quantitative indexes. On the other hand, there are the larger questions directed toward evaluating the "effectiveness with which human resources are utilized"- in two economic systems which differ as to ends and means but which are faced with the common problem of bringing manpower into phase with the changing requirements of an industrialized society. Furthermore, since the Soviet Union and the United States are seen increasingly "in competition" with one another in the economic sphere, questions on the labor force, as well as others, tend to be viewed in the light of their implications with respect to the outcome of this competition.

In its most basic form, the problem of the labor force common to both the United States (over its history) and the Soviet Union is the general problem of labor in industrialization, the problem of transforming ordinary manpower from "primitive tillers of the soil into a disciplined industrial labor force ", committed to a "drastically new way of life";[1] and the problem of developing cadres of skilled and higher level manpower, i.e., "personnel with the skill necessary to formulate and execute development policies,"[2] to handle positions of management, planning and research.

These demands of a developing economy quite evidently involve both quantitative and qualitative changes in the labor force, which may be conveniently categorized under four headings:

(1) The number of persons available for productive work, by age and sex (i.e., the "labor force" in the basic sense of the word);

(2) The level and distribution of skills and experience;

(3) Distribution by the major characteristics of the demand for labor, (e.g., job requirements, time and seasonal patterns of work, geographical location, industry, etc.);

(4) Effectiveness or efficiency in given work situations.

These are what might be called the four dimensions of the labor force, and set the terms on which the Soviet Union and the United States will be compared in the present paper.

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[1] W. Galenson, ed., "Labor and Economic Development" (New York: John Wiley & Sons, 1959) p. 2.

[2] Ibid., p. 15.

+ For a study leading to a different set of conclusions, see the paper submitted by J. Kantner, of the US Bureau of Census, to this subcommittee

At the same time, it must be recognized that the contribution of labor to economic performance is not an absolute and isolated matter; in other words, a certain sense of relevance must be kept in mind. Even if we could quantify or otherwise delineate "labor" as such, proper interpretation and evaluation of the results would depend, for example, on the particular stage of economic development we were considering, as well as on the availability and effectiveness of other resources such as "capital" and "land".

Furthermore, these relationships are more than in the nature of a static comparison. They reflect an underlying, continuing process of change and adjustment. For this reason, it is essential in the final analysis to take account of the organizational and structural framework within which methods, practices, and policies with respect to the utilization of human resources work themselves out. In other words, it is necessary to examine the "web of rules"[3] which serves in any industrialized system to relate the elements of labor to each other and to the other parts of the system.

This is the broad outline suggested by a comparison of the "labor force" in the Soviet Union and the United States. Unfortunately, neither the size of this paper nor the level of our understanding of many of the questions will permit a comprehensive survey at the present time. By the same token, however, it should be possible to touch upon some major issues and at the same time to keep the larger outline in mind. The approach will be to consider each of the four dimensions of the labor force listed above in turn, and then to make some concluding observations.

LABOR FORCE TRENDS

The first dimension of the labor force refers to the number of persons, by age or sex, who work or who want to work for pay or profit, or who contribute without pay to the principal productive effort of the head of the household. Such measures of the total labor force of the Soviet Union and the United States, for selected years beginning with 1860 are summarized in Table 1. The U.S. figures are from the dicennial censuses through 1930 and the monthly survey of the labor force beginning with 1940. The USSR figures are estimates based on data from several censuses, as well as on available noncensus data. Projections of the labor force from 1960 to 1975 are based on assumptions that will be set forth below.[4]

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[3] C. Kerr and A. Siegel, "The Structuring of the Labor Force in Industrial Relations: New Dimensions and New Questions," Industrial and Labor Relations Review, vol. VIII, No. 2, Janaury 1955, pp. 162-163.

[4] Details on the Soviet data themselves and on methods and concepts for this section of the paper may be found in W.W. Eason, "Soviet Manpower: The Population and Labor Force of the USSR", an unpublished Ph.D. thesis on deposit with Columbia University.

Table 1. - The total labor force of the USSR and United States, by sex, estimated, 1960-1955, and projected, 1960-75[1]

Year[2]	Both Sexes			Males			Females		
	USSR[3]	United States[4]	United States percent of USSR			United States percent of USSR			United States percent of USSR
	Thousands	Thousands		Thousands	Thousands		Thousands	Thousands	
1860	35,500	10,500	29.6						
1900	64,400	28,800	44.7	35,400	23,500	66.3	29,000	5,300	18.3
1928	85,100	46,700	54.9						
1930	88,500	48,900	55.3	47,400	38,100	80.4	41,900	10,800	26.3
1940	105,300	55,700	53.0	58,400	41,500	71.1	46,900	14,200	30.3
1950	105,300	64,500	61.3	51,900	45,900	88.4	53,400	18,600	34.8
1955	111,600	67,700	60.7	58,000	47,600	82.1	53,600	20,100	37.5
1960	114,800	73,200	63.8	62,100	49,900	80.4	52,700	23,200	44.0
1965	117,100	79,200	67.6	65,800	53,000	80.5	51,300	26,200	51.1
1970	123,100	86,200	70.0	72,000	56,800	78.9	51,100	29,400	57.5
1975	130,600	93,400	71.5	79,400	60,900	76.7	51,200	32,500	63.5

[1]Data for the USSR are derived from sources and by methods set forth in W.W. Eason, "Soviet Manpower: The Population and Labor Force of the USSR," unpublished Ph.D. thesis on deposit with Columbia University, adjusted to conform to the preliminary results of the 1959 Soviet census, Pravda, May 10, 1959.

Data for the United States are from C.D. Long, "The Labor Force Under Changing Income and Employment" (Princeton: Princeton University Press, 1958), pp. 285-287 and 316-317; for 1928 only from data in S. Lebergott, "Annual Estimates of Unemployment in the United States, 1900-1954," in C.D. Long, ed., "The Measurement and Behavior of Unemployment" (Princeton University Press, 1957, p. 215; and Bureau of the Census, "Projections of the Labor Force in the United States, 1955 to 1975", Current Population Reports Series P-50, No. 69, October 1956, pp. 12-13.

[2]As of January, for USSR,; April, 1860-1930, first quarterly average, 1940-55, and annual average, 1960-75, for United States.

[3]Territory for 1960-1930 is Soviet pre-1939; territory for 1940-75 present.

[4]U.S. data through 1930 are from censuses; from 1940-55, according to current population surveys.

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Table 1: Continuation

Year	Females Percent of both sexes	
	USSR	United States
1860		
1900	45.0	18.4
1928		
1930	46.4	22.1
1940	44.5	25.5
1950	50.7	28.8
1955	48.0	29.6
1960	45.9	31.7
1965	43.8	33.1
1970	41.5	34.1
1975	39.2	34.8

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In sheer numbers, the Soviet Union has been frequently characterized in terms of a manpower "pool" which is abundant relative to other resources, including arable land and capital equipment, and which is rapidly growing. The United States, on the other hand, at least from a historical point of view, has been portrayed as a country of labor "scarcity", manifest particularly in the incentives traditionally offered to immigration.

With respect to the earlier periods of industrialization in the two countries, this comparison is essentially valid. In more recent years, however, the difference has been sharply narrowed, largely due to basic changes in the structure of resource relationships in the Soviet Union. Since the beginning of the industrialization drive in 1928 the capital stock has increased and modern technology has been introduced on a wide scale, with the result that labor productivity has increased measurably. From this source alone, one can speak of a rise in the "capital-labor" ratio since 1928, or a decline in the "abundance" of labor to capital.

But there is a further movement in the same direction, particularly important at the present time, which is attributable to demographic forces. Partly because of the catastrophic effects of World War II, but also due to a relatively greater decline in the birth rate than death rate in peacetime, the overall rate of population growth (other than through territorial annexation) since 1928 has considerably declined. The first effect on the rate of growth of the labor force was felt as a result of the war itself, through the premature death of more than 20 million adults.[5] The second effect is being felt now, and will be felt in the future, with the entry into the working and reproductive ages of persons born during the war, when birth rates were low and infant mortality rates high.

Assuming unchanged labor force participation rates by age and sex (about which more below), the incidence of mortality during the war, as shown in Table 1, had the direct effect of holding the total labor force to approximately the same level in 1950 (105 million) as it was in 1940, whereas in the absence of war the number would have increased by more than 10 million.

From 1950 to 1955, on the other hand, there was an increase in the labor force of more than 6 million, reflecting the entry into the working ages of individuals who were born before the war, when the birth rate was relatively high, and who were consequently young enough to escape some of the hazards of the war.

At present and over the next few years, the dominant effect is a rather sharp slowing down in the rate of growth of the labor force, due to the entry of the "war babies" into the working ages. This is largely the reason why the Soviet labor force in table 1 displays between 1955 and 1965 only one-half of the average absolute increase that it does between 1950 and 1954.[6]

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[5] W.W. Eason, "The Soviet Population Today: An Analysis of the First Results of the 1959 Census," Foreign Affairs, vol. 37, no. 4, July 1959, pp. 598-606. Needless to say, not all of those who died prematurely would have been in the labor force in any event.

[6] The 5-year intervals on which these estimates are based are selected for estimating convenience, so that the years cited cannot have the connotation of annual estimates.

Beginning approximately with 1965, however, because of the lower peacetime birth rates of recent years, the absolute increase of the labor force should return to earlier levels, although the increase relative to the total population will be somewhat lower.

These are very significant developments toward accelerating the reduction in the relative "abundance" of manpower that was already taking place in the course of Soviet industrialization. At the same time, it would be a mistake to exaggerate the implications, or to overstate the case in terms of an overall labor "shortage".

In the first place, the Soviet labor force is still increasing, although the rate of increase has been temporarily cut in half. More important is the fact that the "labor problem" in economic development is really a question of the changes which must be brought about in the "qualitative" dimensions of the labor force. To a certain extent, sheer numbers of persons and the increase therein can serve the cause of rising production. However, the ultimate goals of rising productivity per worker (and rising living standards per capita) demand that sooner or later there be "qualitative" changes in the labor force, lest the full fruits inherent in the accumulation of capital, the advancement of technology, and the increased complexity of economic organization, be foregone. What a slowing down in the rate of increase of the number in the labor force entails is a quickening of the need to bring about the "qualitative" changes which are necessary if overall economic goals are to be met.

Broad relationships of this type may very well lie behind what is apparent in Soviet circles as a heightened concern at this very time for improving the effectiveness of manpower utilization, from the ordinary worker through higher level technical and managerial personnel. Soviet planners and administrators have always been concerned with these problems, if is true, but the results until recently have been well below levels of manpower efficiency attained in the more advanced industrial countries. This is understandable, given the magnitude of the problem, the time factor, and the possibility hertofore or relying more on quantity than on quality. The present indication is of more persistent and pervasive efforts to raise the qualitative indexes. Attention to these questions will be given below.

Some final observations on the influence of population growth on labor force trends in the two countries may be made on the basis of a direct comparison of the data in table 1. The outstanding characteristic of the comparison is the amount by which the rate of increase of the US labor force has exceeded that of the Soviet Union (and imperial Russia, on Soviet territory), Between 1860 and 1955, the Soviet labor force increased by about 3 times from 35 to 112 million, while the labor force of the United States increased by 6 times, from 11 to 68. In other words, the US labor force was in 1960 equal to 30 per cent of the Soviet labor force, and in 1955, 60 percent.

Furthermore, if the assumptions on which the respective projections to 1975 are based are at all "predictive", the US labor force by that time will equal approximately 70 percent of the Soviet.

Tending to raise the rate of growth of the US labor force relative to that of the Soviet Union since 1860 were the waves of immigration of the 19th and early 20th centuries. Tending to lower the Soviet rate of growrh were the effects of World Wars I and II and of the Civil War of 1918--20, together with the decline in population growth during the early 1930's.

These particular considerations are more than enough to account for the implied demographic effects on relative labor force growth rates, because the overall patterns of peacetime birth and death rates (until the 1950's), taken by itself, actually shows an earlier decline in the rate of natural increase of the population in the United States than in the Soviet Union, as an integral part of the process of industrialization which began much earlier in the United States.

Since about 1950, crude birth and death rates and the rate of natural increase of the population have been quite similar in the two countries, but this may be a somewhat misleading identity from the standpoint of its effect on the labor force. In the first place, as pointed out above, relative rates of growth of the respective labor forces in the immediate future will be quite different due to the influence of the war, another way of saying that beneath the pattern of similar birth and death rates lies a rather different population structure by age and sex. This fact partly explains the increase in the US labor force from 61 percent of the Soviet in 1955 to 68 per cent in 1965, but the remainder of the explanation is the assumption of declining labor force participation rates in the Soviet Union after 1950 (about which more below).

The assumption of declining labor force participation rates is also probably the major (if not entire) explanation for the fact that from 1965 to 1970 the US labor force percent of the Soviet rises at all. In other words, from demographic causes alone one would expect the rates of increase of the respective labor forces to be more or less similar in this period, due to the entry into the working ages of persons born beginning with 1950, when birth rates were similar.

After about 1975, however, the participation rates may very well move once again "in favor" of the United States, as far as purely demographic considerations are concerned. The reason lies in the possible pattern of birth rates over the immediate future, since it is these age groups that will provide the new workers in about 15 or 20 years. On the assumption that fertility rates with respect to women of childbearing ages remain more or less unchanged for each country, over the coming years the birth rate in the Soviet Union will almost certainly fall below that of the United States. This is because the relatively small age-groups born during the war are now entering the reproductive ages in the Soviet Union, while the opposite is true in the United States.

Up to this point the discussion has been almost entirely concerned with the relationship of population growth to labor force trends. The implication is that in the long run the two are more or less synonymous, i.e., that questions of overall labor supply are ultimately questions of population. At any moment in time, however, the size of the total labor force

is also a function of the percentage of the population in the labor force, by age and sex, a consideration which also contributes in minor degree to longrun trends. More important, changes in the percentage of the population in the labor force with respect to a given country are significant for what they reveal about attitudes toward work and leisure in response to changes in income and other variables. Soviet data are extremely inadequate for a comparison with the United States on these grounds, but some general observations may nevertheless be made.

Reproduced in table 2 are selected percentage relationships between the population and the labor force with respect to ages 14 and over in the United States and 16 and over in the Soviet Union. (The difference in age coverage introduces a minor difficulty in making this comparison, but is not readily eliminated on the basis of available data.)

The percentage for the United States is consistently below the corresponding figure for the Soviet Union, and is also essentially stable. This stability may be seen as well in the US data for earlier years,[7] and stands as the net effect of a rising percentage of females and falling percentage of older men and youths in the labor force, the percentage of males in the prime working ages in the labor force remaining about constant.

Table 2. The percentage of the population of the USSR and USA in the labor force, ages 16 and over (USSR) and 14 and over (USA) by sex, estimated and reported, 1926-1955, and hypothetical, 1960-75[1].

Year	Both Sexes		Males		Females	
	USSR	USA	USSR	USA	USSR	USA
1926	81.2	----	92.9	----	70.8	----
1930	----	53.9	----	84.1	----	24.3
1940	79.9	55.5	95.9	83.9	66.3	28.2
1950	78.2	58.3	95.6	84.4	66.6	33.1
1955	76.2	58.0	95.0	82.3	62.8	34.5
1960	74.2	57.9	94.5	81.0	59.2	35.9
1965	71.8	57.7	93.3	79.3	55.3	37.2
1970	69.8	58.0	92.5	78.7	51.8	38.5
1975	68.2	58.8	91.8	78.9	48.6	39.8

[1]Sources of data are the same as in table 1.

Compared to other countries of the world, a very large percentage of the Soviet population has always been engaged in "economic activitye". In Imperial Russia, a predominantly agricultural economy, the principal production unit of which was the individual household organized into villages and operating under the general control of the landed estate, virtually all able-bodied persons of both sexes participated in primary economic activity at least part of the year. This con-

[7]C.D. Long, "The Labor Force Under Changing Income and Employment" (Princeton: Princeton University Press, 1958)

dition is generally appreciated, but statistical confirmation rests almost entirely with the Soviet census of 1926, taken just before the start of the industrialization drive and the collectivization of agriculture. The census shows 81 per cent of the population age 16 and over in the labor force, compared to 55 percent of the US population age 14 and over in 1930.

Under conditions of the industrialization drive, the percentage of the population dependent on nonagricultural occupations increased (see table 5, below), butthis may not have reduced significantly the percentage of the population in the labor force. Unfortunately, comprehensive figures on the total labor force of the USSR, except for the control figures as of 1931, have not become available since the 5-year plans began. The results of the 1937 census were officially abrogated shortly after the census was taken,[8] and although tabulation was subsequently completed,[9] were never published. Releases from the 1939 census, on the other hand, have been confined to population data with partial detail, including a classification by "social groups" which is only of indirect aid in deriving labor force figures. The preliminary results of the 1959 census include no data on the labor force.

In short, with the exception of the 1931 data, Soviet estimates of the total labor force during the plan years have never been published. In the absence of adequate data, therefore, any indication of the changes in the relationship between the population and the labor force must be to a certain extent speculative.

Under conditions of the plan years, certain factors would appear to have increased the percentage of the population in the labor force and others to have decreased it; but on balance, the effect was probably to decrease the percentage to some degree. Tending to increase it would be (1) the efforts of the Soviet Government to get the maximum proportion of the adult population into the labor force, although considering the high proportion already existing on the eve of the plans, there are decided limits in this direction; (2) the increase in the population age 16 to 59 relative to other groups; and (3) possibly the indirect effect of the fall in real wages, which were low before the plans and which have apparently remained below the 1938 level until as recently as 1952.[10] Tending to decrease it would be (1) the increase in school attendance, although this would be more a case of reducing the average number of days worked during the year, since many young people (especially on farms) would continue to be in the labor force at least part of the year; and (2) the large-scale migration of females from rural to urban areas.

On the basis of these general considerations, amplified and supported by indirect and fragmentary evidence the percentage of the Soviet population in the labor force - by age and

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[8] Izvestia, September 26, 1937.

[9] F. Lorimer, "The Nature of Soviet Population and Vital Statistics", The American Statistician, April-May 1953, pp. 7-11.

[10] I. G. Chapman, "Real Wages in the Soviet Union, 1928-52," The Review of Economics and Statistics, May 1956. This refers to changes in the purchasing power of money wages, and does not include changes in "socialized" wages.

sex and rural and urban areas - was derived for 1939-40. The results of this estimate, with respect to the population age 16 and over, are reproduced in table 2.

However valid these assumptions for the first decade of the five year plans may be, the continued absence of concrete information from official sources makes it increasingly difficult to estimate percentage relationships for recent years, and to make projections therefrom for the future.

One possibility is that the percentages will continue to be high in the future, that is, until fundamental changes in economic and social conditions create a climate in which a certain proportion of women and older people who are now in the labor force will be inclined to leave. (Visitors to the Soviet Union seem to think that such a climate does not yet exist, and that with respect to women in particular, labor force participation rates in urban as well as in rural areas remain relatively high.)

Until this decline does take place, labor force participation rates can be expected to stay near the 80 percent of the population age 16 and over which follows from the above assumptions, modified slightly by changes in the composition of the population by age and sex.

The data for the Soviet Union reproduced in table 2, however, are actually drawn up on the assumption of a definite but modest decline in the percentage of the female population and of the young and old of both sexes in the labor force, beginning with 1955. The only real evidence for making such an assumption is highly indirect, consisting of the observation that preplan rates were exceptionally high by international standards, implying that they should very well come down sooner or later, and that the period beginning with 1955 is the first to reflect a certain amount of "normality" and "stability" in Soviet affairs, a necessary condition for the ultimate decline. Having passed through the exceptional period of the 1930's as well as the war and its aftermath, i.e., through the death of Stalin, it can be argued, Soviet labor force participation rates may very well now begin to resemble those of other industrialized countries.

When and if such a decline in labor force participation rates does take place, it will tend to remove one of the features distinguishing the Soviet labor force from that of other industrialized countries, namely, the high percentage of females. At the turn of the century, according to table 1, the share of the labor force comprising femals in Imperial Russ (45 per cent) was almost three times that of the United States (18 per cent). In the intervening years, due partly to the substantially greater mortality of males than females, in World Wars I and II and the period of the early 1930's, and also to the assumption of continued high participation rates through 1950, slightly more than one-half of the Soviet labor force in 1950 was comprised of females. Over the same half century, however, the labor force participation rates of females in the United States has increased, with the result that the US percentage in 1950 was only about one-half that of the Soviet Union (compared to one-third in 1900). If the assumptions on which the population and labor projections in tables 1 and 2 are based are correct, by 1975 the sex composition of the respective labor forces will be roughly similar.

THE LEVEL AND DISTRIBUTION OF SKILLS AND EXPERIENCE

The need to develop requisite skills among the members of the labor force and to raise the general level of their experience, if the Soviet Union is to become a truly industrialized nation, has been recognized from the earliest days of the regime. The country began the process of industrialization with essentially the same dearth of skills and experience among the labor force as a whole as other underdeveloped countries, with the added fact that a number of the most experience and qualified people had to be effectively eliminated from positions of responsibility for essentially political reasons.

On the eve of the first 5-year plan (1928) approximately 80 per cent of the Soviet population was dependent on agricultural or other rural sources of income (see Table 4, below), signifying in this case an almost total lack of experience, training or even familiarity with an industrial way of life. In the intervening years - through the vastly expanded educational system, the large-scale movement of the population to urban areas and to non-agricultural employment, the mechanization of a certain

amount of farm work, and incessant indoctrination through the press and radio - the Soviet population, although still more than half in rural areas, has become essentially familiar with the requirements of an industrial way of life.[11]

The outstanding feature of his development, of course, is not that it has happened, because in broad outline it follows the pattern of every industrializing country, including the United States, but that it happened in such a short period of time. A significant aspect of the way it took place, moreover, is not the expansion of the system of formalized training, important though it is, but the more indirect and generalized procedures by which the labor force has become acclimated through what is really "on-the-job training" in the most general sense of the term.

This is dramatized early in the period by the sudden and marked increase in the number of wage and salary workers in state enterprises during calendar year 1931. Largely the result of reactions against collectivization and appearing as a migration of peasants to urban areas, this increase was well above planned rates.

It may be argued that if industrial enterprise managers had been economically prudent, payrolls would not have increased by such a large amount in 1 year (1931), and remained more or less unchanged for several years thereafter. The mass exodus to the cities in 1931 would seem necessarily to have led to unemployment under "normal" conditions.

On the other hand, it is possible to view the "hiding" of manpower in these years as an investment in training, or at least in "indoctrination". One of the big problems facing the Soviet leaders during the 1930's was the acclimatization of the peasant migrant to industrial life. In this sense his inclusion on the payrolls, rather than being left unemployed and forced to return to the countryside, may be viewed as a contribution tending to balance the negative effects in terms of per capita productivity.[12]

Without discussing the Soviet educational system in any detail, since it has been the object of considerable attention in recent years,[13] certain observations can be made about the problem of developing the skills and experience required by the Soviet economy in its present stage of development.

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[11] W.W. Eason, "Are the Soviets Winning the Battle of Production", Committee for Economic Development, "Soviet Progress vs. American Enterprise" (N.Y.: Doubleday & Co, 1958), p.100

[12] W.W. Eason, "Labor Force Materials for the Study of Unemployment in the Soviet Union," The Measurement and Behavior of Unemployment, a conference of the Universities-National Bureau Committee for Economic Research (Princeton: Princeton University Press, 1957), p. 415.

[13] For example, N. DeWitt, "Soviet Professional Manpower: Its Education, Training and Supply" (Washington, D.C.: National Science Foundation, 1955); and A.G. Korol, "Soviet Education in Science and Technology" (New York: John Wiley & Sons, 1957).

The key to the orientation of Soviet administrators to these problems may very well lie in the broad aims according to which the educational system is presently being reorganized. The direction of the discussion seems to be toward a system which will provide some combination of the following objectives : (1) a stepping up of the exposure of the broad mass of the younger elements of the population to concrete work situations, regardless of their future career objectives, in the hope that this will make them accordingly more sensitive to the rank and file problems of an industrialized society; amd (2) the provision for the selection and training of those most qualified for high level technical, managerial, and research positions, having in mind that the program for these individuals requires a good deal of formalized training.

These two objectives represent two schools of thought in the Soviet Union at the present time, and the final "balance" in terms of emphasis and direction remains to be determined. In any event, the evidence does seem to point to greater emphasis than in the past , for the mass of youth, on receiving production line experience before they are admitted to higher education. As long as this program is not pushed to the point where it depletes or seriously delays the training of individuals whose ultimate careers - for example, in scientific research - will never place them in direct contact with problems of industrial production, it has some merit.

In the first place, for technological and other reasons, the Soviet economy has until recently been operating under the general conditions of a relative abundance of labor, as noted above, with a level of efficiency of labor utilization which is relatively low compared to the more industrialized countries. As part of the efforts to raise the effectiveness of labor utilization, the goal will be achieved more easily to the extent that the worker feels a certain dignity and status in his position as a worker. The ideology of the Soviet state, it is true, centers on the ordinary worker; but the evidence seems to be that in the overriding need to develop individuals with higher skills and techniques, an understandable glorification of the manager and engineer has set in. The complaint is made that youths frequently regard production-line work as something less than desirable, and individuals so engaged as of relatively low status.

In other countries and systems, the trade union, by taking the part of the worker against management or the state, can sometimes give the worker a certain sense of status and even power. In the Soviet state, if the same objective is to be achieved, the worker must first of all identify himself with the socialized framework and objectives of society, at the same time he regards his individual work situation with what is essentially a feeling of satisfaction. If the reemphasis of the reorganization of the educational system along these lines succeeds in raising the dignity and worth of ordinary labor, a difficult objective under any conditions, it may very well reap intangible benefits in worker morale and efficiency.

A second (and probably secondary) effect of the reorganization would seem to be related to the underlying structure of the labor force in terms of age, as a reflection of the distribution in

terms of skills and experience. For this purpose, the labor force may be divided into the following groups:

(1) The senior group in the labor force in the next decade from which, in addition to others, are drawn top managerial personnel, as well as technical and lower personnel with accumulated years of experience, is the group born anywhere from about 1900 to 1920. Some of these were old enough to have been subjected to the military hazards of World War I; some were born during the Civil War, when the birth rate was low; and almost all would have been subject to military service in World War II. For all of these reasons, this is necessarily a relatively small group.

(2) The middle group in the labor force in the next decade will be the one born between the early 1920's and World War II. For most of these years, birth rates were relatively high, and the majority of the people in this group were of an age to have escaped military service during World War II. These are the members of the labor force in the next decade who are "in transition" to positions of responsibility; and who are otherwise acquiring experience in all types of jobs. For the aforementioned demographic reasons, this is necessarily a relatively small group.

(3) The younger group in the labor force in the next decade, those entering the labor force, will be persons born during the years of relatively low birth rate, and will therefore be of relatively small number in the total.[14]

By taking a higher percentage of students for engineering institutes and other specialized schools from those who are otherwise qualified but who have production line experience, the effect will be , among others, to raise the average age of the students in these schools. A higher percentage of youths presently in secondary schools will enter production for several years before going on to higher training; and a higher percentage of entrants to the institutes will come from the somewhat older persons already on the production line.

This means that the bulk of those entering training (in institutes) in the coming years will be drawn from the relatively large middle group mentioned above which has already entered the labor force. This will serve to redress any "imbalance" in the proportion of trained and untrained people which occurred when this relatively large group passed through the ages heretofore devoted to advanced training. It will also tend to maintain a similar "balance" in terms of formal skills and age structure between the middle groups and the relatively small younger group in the labor force. This is done, in effect, by not expanding the educational network to supply trained people from all age groups, but by forcing the persons in the younger groups on the average to delay training by a certain number of years, and in the meantime to supply the needs for ordinary labor from this source.

[14] This is discussed in greater detail in W.W. Eason, "Population Growth and Economic Development in the USSR", in the "1958 Proceedings of the Social Statistics Section of the American Statistical Association."

In short, one effect of the educational reform is to give additional opportunity to the people in the middle-age cohorts to raise their qualifications, and to bring the rate at which the advanced schools turn out people of given ages more into line with the rate at which these people are being supplied to the national economy.

In the longer run, as the level of technology and the complexity of industrial organization in the Soviet Union continues to rise, one can expect, in line with recent developments in the United States,[15] that more and more attention will be paid to the development of higher level technical and managerial manpower, and less to the problems of the ordinary worker, whose proportion in the labor force will decline. We cannot say what effect this will have on fundamental ideology with respect to "labor" in the Soviet Union; but it will certainly have an important effect on the orientation of the educational process and the preparation of human resources for the demands of industry at the highest levels of technique and organization.

The Distribution of the Labor Force by Selected Characteristics of The Demand For Labor

Labor mobility is a hallmark of the industrialized process. Labor is required to move from one job to another and from one industry to another. The time and seasonal pattern of work changes as does the geographical location of economic activity.

The Soviet and U.S. labor force will be compared in this section according to the following major characteristics: the distribution by socioeconomic groups; the distribution by agricultural and nonagricultural occupations; and the hours of work.

The Distribution of the Labor Force by socioeconomic Groups.

Thirty years of rapid industrialization under national economic planning have led to significant changes in the economic characteristics of the Soviet labor force. The expansion of industry has increased the nonagricultural labor force from 18 per cent to more than 50 percent of the total labor force; the widening of the network of state enterprises has tripled the number of wage and salary workers; collectivization has altered the characteristcs of the agricultural labor force; and private eco omic activity has been drastically curtailed. These developments, in turn, have been reflected in an increase in the urban population to three times the 1928 level, or from 18 to about 50 per cent of the total population.

Most of these changes are apparent in other countries undergoing industrialization, but several aspects of the Soviet case are unique. First, the change has been more rapid than in other countries. Second, the rate of change was irregular during the transitional phase of the early years of the plans, more, it would seem, from the pressure for speed and from the superimposition

[15] S.E. Hill and F. Harbison, "Manpower and Innovation in American Industry" (Princeton: Industrial relations section, Princeton University, 1959).

Table 3 - The Labor Force, by socioeconomic groups, USSR, 1928, 1940 and 1955[1]

Socioeconomic groups	1928	1940	1955	Percentage distribution 1928	1940	1955
	Thousands	Thousands	Thousands	Percent	Percent	Percent
Wage and salary workers.....	11,600	31,400	49,300	13.5	29.8	44.2
Co-op handicraftsmen.....	800	1,800	1,800	.9	1.7	1.6
Non co-op handicraftsmen.....	1,700	2,200	500	2.0	2.1	.4
Collective Farmers.....	1,500	44,700	45,000	1.7	42.5	40.3
Private famrers.....	67,400	10,800	200	78.3	10.3	.2
"Bourgeois".....	1,400	------	------	1.6	----	----
Employed Labor force.....	84,400	90,900	96,800	98.0	86.3	86.7
Unemployed and transients.....	1,100	------	------	1.3	----	----
Discrepancies in derivation...	0	11,400	10,600	0	10.8	9.5
Civilian Labor Force.....	85,500	102,300	107,400	99.3	97.1	96.2
Military	600	3,000	4,200	.7	2.9	3.8
Total Labor Force.....	86,100	105,300	111,600	100.0	100.0	100.0

[1]Derived from sources and by methods set forth in Eason, op. cit., adjusted to conform to the preliminary results fo the 1959 Soviet census.

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of the planning mechanism than from the requirements of industrialization itself. Third, certain unique relationships between the labor force and the work process were established, primarily in the case of collective farming. And, finally, there is the matter of forced labor, a condition of Soviet economic development which has attraced particular attention from non-Soviet analysts.

Data to illustrate these developments, for 1928, 1940, and 1955, are in table 3. The total labor force for 1940 and 1955 is estimated from the population and assumptions with respect to the percentage of the population in the labor force, as described above. (See also table 1.) The data by socio-economic groups are based on "establishment-type" statistics reported separately for each of the indicated groups. An elaborate estimating procedure had to be devised in an attempt to eliminate sources of double-counting, etc. However, it will be seen that for 1940 and 1955, as well as for other years in the 1930's for which similar estimates have been made, there is a residual category, "discrepancies in derivation." The sum of the parts, in other words, is less than the whole.

The fact that this residual is consistently positive would suggest one or more of the following factors as an explanation: (1) understatement of reported labor force data (establishment statistics) on which the estimates are based; (2) overestimate of the percentage of the population in the total labor force; (3) nonreporting of labor force categories, notably forced labor; (4) assorted errors in estimation. Although there is some discussion in Soviet sources to support the possibility that reported labor force data involve understatement, especially with respect to the cllective farm labor force, the discussion is too general to be translated into quantitative terms.

Aside from the real possibility that some if not a major share of the residual is due to the nonreporting of certain labor force categories, we may very well be facing here, in somewhat exaggerated form, the assorted weaknesses in noncensus sources of information on the population and labor force that cause Soviet statisticians and other social scientists to look forward to the publication of the results of the 1959 census. In any event, the existence of the residual contributes a special difficulty to any analysis of the distribution of the Soviet labor force by occupations or socioeconomic groups.

As far as the demand for labor is concerned, the expansion of the nonagricultural sector of the Soviet economy under the 5-year plans has appeared almost entirely as an increased demand for wage and salary workers. Selected data for wage and salary workers, in comparison with the United States, are reproduced in table 4. (The data in this table refer to nonagricultural as well as agricultural wage and salary workers, although in the case of each country the latter comprises a relatively small proportion.)

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Table 4. The number of wage and salary workers, USSR and United States, selected years 1928-1965[1]

(in thousands)

	U.S.S.R.				United States				USSR percent of United States (both sexes)
	Both sexes	Males	Females	Females percent of both sexes	Both Sexes	Males	Females	Females percent of both sexes	
1928, year's average	11,599	8,477	3,122	26.9	----------	----------	----------	----------	----------
1940, January-March[2]	29,401	18,111	11,290	38.4	34,770	24,200	10,570	30.3	84.6
1942-45[3]	18,400	8,600	9,800	53.0	40,180	26,680	13,500	33.6	45.8
1950, Sept.	40.400	21,410	18,990	47.0	49,015	33,547	15,468	31.6	82.4
1958, year's average	52,400	----------	----------	----------	53,000	34,600	18,400	34.7	99.9
1965 year's average[4]	64,000	----------	----------	----------	----------	----------	----------	----------	----------

[1]Data for the USSR are derived from sources and by methods set forth in Eason, op. cit; and Pravda, Jan. 16, 1959, and November 14, 1958. Data consisently include servants but exclude collective farm tractor drivers (estimated). Data for the United States are from selected issues of the Monthly Report on the Labor Force.

[2]USSR data are January; US data, March.

[3]USSR data are 1942; U.S. data beginning of 1945.

[4]According to 7-year plan.

The demand for wage and salary workers in the Soviet Union was satisfied during the 1930's partly by the supply of manpower already in the urban areas, consisting of both the unemployed persons and those in other categories of the urban labor force; partly by the migration of labor from rural to urban areas; and partly by the migration of labor from rural to urban areas; and partly by drawing persons into the labor force. In sum total, rural-urban migration and the transformation of formerly rural communities into urban areas appear to have accounted for more than 80 per cent of the increased labor supply of wage and salary workers in urban areas.[16]

At the same time, the population of working ages was increasing, although the average rate of increase during the intercensal period (1926-1939) was less than projected on the basis of preplan survival ratios. The absolute increase in the adult population age 16 to 59 between 1926 and 1939 was at a rate of 1.5 percent per year, or in total 16.5 million. This may be compared to the reported increase of 18.3 million wage and salary workers over the same period. With an allowance for a lower rate of labor force participation among females than males, the absolute increase in the population of prime working ages (16-59) represents an increase in the labor force equal to almost two-thirds of the reported increase in the number of wage and salary workers alone.

All things taken into account, the sources of labor supply seem adequate to account for the indicated overall rate of increase in wage and salary employment without serious dislocation in other sectors of the labor force. Even in the most recent period, deficits in the population of working ages caused by the war, and what might otherwise be mounting resistance to rural-urban migration at past rates, have tended to be compensated for by the increase of the population of working ages brought about by the influx of persons born during the years of relatively high birth rates in the late 1930's.

Within this framework of demand and supply factors, it is of interest to note that over the period from 1928 to the present, the number of female wage and salary workers has increased at a more rapid rate than the number of males. The result is that females now comprise about 50 percent of the total number of wage and salary workers, compared to 27 percent at the beginning of the plans; or, in other words, that the absolute increase in the number of females (20 million to 1955[17]) has been greater than the increase in the number of males (17 million). The demographic factors outlined above, in particular the declining sex ratio, and the traditionally high labor force participation rates of the females population, undoubtedly have contributed to these changes.

Considering the period of almost 30 years between 1928 and 1955, the overall increase of 17 million male wage and salary workers is very little more than 15 million increase in the number of males age 16 to 59 in the population; and the corres-

[16] S.I. Sul'kevich, "Territoria i naselenie SSSR," (Moscow, 1940), p. 30.

[17] Eason, op. cit for further details on this and other parts of this discussion.

ponding increase in the number of males age 16 to 59 in the population; and the corresponding increase in the number of female wage and salary workers (20 million) is considerably less than the increase in the number of females age 16 to 59 (29 million). It thus appears that the demand for wage and salary workers, a "priority" sector from the standpoint of manpower allocation, has been more than met (according to the reported data) by the net increase in the population of working ages.

Over the next decade, on the other hand, and in particular with respect to the increase projected in the 7-year plan (1965), the number of wage and salary workers will probably increase at the expense of other sectors of the labor force, or through a modification of alternative non-labor demands, such as formal education. For all of the implications of the reorganization of education discussed above, a reduction in the number of students is not contemplated.

Data on the number of wage and salary workers in the United States, in table 4, show that as of 1958 the number in the two countries is essentially equal, culminating in an overall trend since 1928 in which the Soviet figure increased more rapidly than the United States. However, these figures are in a sense not analytically comparable, because in some instances occupations receiving wages and salaries in the Soviet Union receive self-employment income in the United States.

The distribution of the population by dependency on agricultural and non-agricultural occupations.

At the beginning of the five-year plans, the total population of the Soviet Union was almost 50 percent larger than the population on comparable territory in 1897, but the proportion of the population dependent on agricultural occupations was essentially the same - 78 percent compared to 75 percent. Once the plans were underway however, and particularly after collectivization had been achieved, the agricultural population declined, both absolutely and in proportion to the total. Trends in these categories are indicated for selected years in table 5, together with data on the US population by farm and nonfarm residence.

The absolute decline set in after 1930, with the most perceptible downward movement taking place between 1931 and 1933, coincident with the period of rapid collectivization followed by the food shortage; and there was another decline between 1936 and 1938. The reason for the decline in the latter period is not clear, although it appears primarily in the collective farm category.[18]

[18] Ibid.

TABLE ?.--The population dependent on agricultural and civilian nonagricultural occupations, reported categories, Imperial Russia and the U.S.S.R., 1897-1955; and the population by farm and nonfarm residence, U.S.A., 1910-50[1]

	1897[2]	1928	1940	1955
U.S.S.R.				
Population dependent on agricultural and civilian nonagricultural occupations, reported categories:	Thousands	Thousands	Thousands	Thousands
Agricultural.....	93,702	113,300	105,700	87,100
Nonagricultural....	31,938	34,900	68,300	80,500
Total (reported catagories)	125,640	148,200	174,000	167,600
Percentage distribution:	Percent	Percent	Percent	Percent
Agricultural.....	74.6	76.5	60.7	52.0
Nonagricultural....	25.4	23.5	39.3	40.0
Total (reported catagories)	100.0	100.0	100.0	100.0
Population dependent on agricultural occupations, percent of total population, all categories.....	74.6	74.8	53.7	44.1
Population dependent on agricultural occupations, percent of rural population.....	86.1	91.8	78.2	77.2
U.S.A.	1910	1920	1930	1940	1950
Population by farm and non-farm residence:	T'sands	T'sands	T'sands	T'sands	T'sands
Farm.....	32,077	31,614	30,445	30,547	23,332
Nonfarm.....	59,895	74,096	92,330	101,122	127,366
Total.....	91,972	105,710	122,775	131,669	150,698
Percentage distribution:	Percent	Percent	Percent	Percent	Percent
Farm.....	34.9	29.9	24.8	23.2	15.5
Nonfarm.....	65.1	70.1	75.2	76.2	84.5
Total.....	100.0	100.0	100.0	100.0	100.0
Population by farm residence percent of rural population.....	64.2	61.3	56.6	53.4	37.8

[1] Data for the USSR are derived from sources and by methods set forth in Eason, op. cit.

TABLE 5 - Continued

Data for the USA are from US Bureau of the Census, "Historical Statistics of the United States, 1789-1945" (Washington, D. C.: Government Printing Office, 1949), p. 29; and "Continuation to 1952 of Historical Statistics***" (Washington, D. C.: Government Printing Office, 1954), p. 3.

2 Territory for 1897 is Imperial Russian.

By 1938, the population dependent on agricultural occupations was 61 percent of the total population dependent on occupations in all "reported" categories, and 54 percent of the total population. Essentially the same relations are seen to hold on the eve of World War II (1940), including annexed territories.

The reason for distinguishing between the population dependent on occupations in "reported" categories and the total population lies with the "residual" category which was discussed above. The presence of the residual means that the indicated relationships as a measure of the distribution of the population between agricultural and nonagricultural occupations, must be taken as rough orders of magnitude. With this in mind, it may be pointed out that the data show the population dependent on agricultural occupations as of 1955 to include something more than half of the population dependent on agricultural occupations in "reported" categories, and 44 percent of the total population. The true figure would depend on what would in effect be the distribution of the "residual" category between its agricultural and nonagricultural components.

Speaking in orders of magnitude, however, the distribution of the population between agricultural and nonagricultural sources of livelihood thus appears to have changed more rapidly in the Soviet Union than in other countries undergoing industrialization. At the same time, there remains a relatively large population in agriculture compared to other industrial powers. The United States with only 15 percent of its population now living on farms is one extreme example.

The percentage of the rural population dependent on nonagricultural occupations - roughly equivalent to our "rural nonfarm population" - has also increased proportionately under the the 5-year plans. In this respect, the Soviet Union is moving in the direction of other industrializing countries, but at a slower rate. The nonagricultural share of the rural population increased from 8 percent in 1928 to 21 percent in 1940. The data indicate that only about 24 percent of the rural population were dependent on nonagricultural occupations as late as 1955.

Comparison with US data show an increase in the rural nonfarm population from 36 to 62 percent of the total rural population between 1910 and 1950. The much higher percentage for the United States is in all probability related to the greater incidence of service and retail merchandising activities in rural areas.

Hours of Work

A program is presently underway in the Soviet Union to reduce the average workday to 7 hours (and in some cases 6), without reducing take-home pay. Although this is quite consistent with long-run goals to have part of rising real wages take the form of reduced hours of work, the question which is intriguing is why, in view of the imminent decline in the rate of increase of the population of working ages, the Soviets picked this particular time to reduce hours and in effect further contract labor supply.

The answer would seem to be largely an administrative one. It is known that Soviet administrators are exerting considerable pressure to introduce into production the benefits of technological progress developed in research establishments. The technique of reducing hours while maintaining per-man productivity is viewed by them as an effective method for stimulating each and every enterprise director to move in this direction, at the same time that it provides a ready check on the success of the move.

The question still remains, of course, as to whether t his does not aggravate the labor supply problem unduly. The answer is, undoubtedly, that it does. On the other hand, if we take into account the age structure of the labor force in terms of the three groups, above, and the fact that the rate of increase of the labor force in the future will never again be a high as in the past, this reduction of hours may not necessarily be ill timed.

In the first place, to reduce hours at any time in the future will be to do so in the face of a slower rate of increase of the labor force than in the past. Furthermore, the rate of increase over the past 7 years or so has been unusually high. Taking this 7-year period together with the next seven years, produces an average increase of about 1 million per year, or not below the figure for a number of years since 1928.

As the program is carried out over the next few years, the hours of labor reduced will be primarily those supplied by the relatively large middle group in the labor force. The effect would seem to be to change the balance between skilled and unskilled labor inputs that will appear as long-run labor force growth rates are maintained after the next decade. In short, given the desirability of reducing hours reasonably soon on other grounds, the demographic factor is not a particulary strong argument against doing it now.

Efficiency of the Labor Force

The implication of the declining rate of increase in the labor force, as already pointed out, is a decided pressure on Soviet planners and administrators to use manpower more effectively. In the past, the cost of using it more or less "wastefully" (by Western standards) may have been too small to warrant the effort required to develop a more enlightened manpower policy. From now on the cost of such waste should be much more apparent.

The evidence is that the Soviets may be thinking along the same lines. They have taken a number of steps in recent years which, judged by Western experience, could take them in the direction of increasing the effectiveness of their manpower - from enterprise management to production worker.[19] If we characterize Soviet

[19] Some of the following discussion also appear in Eason, "Are the Soviets Winning the Battle of Production," loc. cit., pp. 98-106.

manpower policies in the past as embodying a combination of the "carrot" and the "stick", with considerable emphasis on the "stick", the recent evidence indicates a shift in the direction of the "carrot" although the change is not in all aspects of policy uniform.

In the main, direct controls over the labor force have been relaxed. Compared to the period beginning with 1940, when workers were not permitted to leave jobs without permission of management, subject to criminal penalties, recent policy changes permit the workers to change jobs on short notice, and the scope of involuntary transfers has been reduced.

Except as a graduate of specialized training, the worker is now freer than he has been at any time since the 1930s to respond to wage and other considerations in seeking and changing the terms and conditions of his work. At the same time, this increased "mobility" of labor does not seem to have resulted in labor turnover as high as it was during the 1930's. Recent evidence on this subject is, however, very fragmentary. Turnover certainly remains a problem, but a larger share of labor "recruitment" appears to be through upward movement within a given enterprise, aided by an expanded system of training programs.

There have also been a number of recent policy changes designed to influence the worker in his relationship to a given job situation. On the one hand there has been a relaxation of policies to discourage negative manifestations of labor toward the demands of the work. For example, punishment for absenteeism, heretofore treated as a criminal offense, is now left to management itself within its prerogatives to "discipline" its work force.

On the other hand, Soviet labor policy has moved in many respects to encourage the postive manifestations of application and effectiveness on the job. The first of these is in the crucial area of wage policy. Without at all rejecting the principle of differential wages adopted in the early 1930-s the movement in recent years has been to improve the wage structure. The pay of the lowest paid workers has been raised, differentials have been widened for certain important skills, greater uniformity in regional differentials has been introduced, the bonus system has been simplified, and base rates (for both piece and time workers) have been raised to a larger share of total earnings - all with a view to increasing the effectiveness of the worker on the job and thereby increasing the productivity of labor.

As part of the reorganization of the administration of the national economy which took place in 1957, labor is being called upon to play a greater role in the day-to-day decision making of the enterprise - without, however, fundamentally usurping the prerogatives of management. This job is to be done by having more and better attended production conferences and by strengthening the system of rewards for suggestions by workers toward improving the work process. The trade unions are supposed to help guide this program. Since the 1930's the unions have been predominantly an arm of the state in mobilizing the workers for production, but recent discussion also stresses their function in seeing to it that all phases of labor policy, as if affects both management and labor, are duly executed in the individual enterprise.

It should be noted that these are not in and of themselves new aspects of Soviet labor policy; rather that they seem to be receiving greater stress than in the past, within the framework of the discussion attending the reorganization of industry.

Finally, labor, as always, is called upon to work for the ultimate success of socialism and the building of communism, as much as for private and present gain. Although the use of a distant goal is open to question as a device for getting individuals to work (and sacrifice) every day at given jobs, it is probably true that the picture of the goal itself has been brought into focus both visually and figuratively by the presence of the earth satellites and rockets to the moon and beyond.[20]

By way of concluding comments, it should be stressed, first, that we cannot tell, nor do the Soviets know, whether these indicated policy modifications will produce the desired results, or what later changes will have to be made. It is true that there are many aspects of the Soviet system which are unique, and which many people feel are at variance with economic efficiency, let alone human welfare. On the other hand, the basic problems of industrialization and economic growth, and the kind of solutions required in the area of manpower resources, are substantially similar wherever they are found. Soviet leadership, since the death of Stalin, has shown increasing signs of recognizing this fact. It has also shown a greater willingness to integrate what is uniquely Soviet with what is required by efficient economic gfowth, to make a practical compromise.

Equally significant, certain basic characteristics of the Soviet scene have irrevocably changed. The Soviet Union has been transformed from an agricultural to an industrial society, with all that this implies for readiness of the work force to respond to the requirements of modern economic life.

It would be difficult to make predictions about the effect of these fundamental changes on the utilization of manpower in the future. But the potential influence on the overall effectiveness of the Soviet economy is great enough that we cannot afford not to watch closely this particular area of their overall activity in the years to come.

CONCERNING THE SCHEDULE FOR COMPLETION OF THE TRANSITION TO A SHORTER WORKING DAY AND THE ADJUSTMENT OF THE WAGES OF WORKERS AND EMPLOYEES

Pravda and Izvestia
September 20, 1959

The 21st Party Congress appproved a program for a further mighty advance in all branches of the national economy and for a continued rise in the living standards of the working people - a great program for the comprehensive building of a communist society in the USSR.

The Party Central Committee, the USSR Council of Ministers and the Central Council of Trade Unions, guided by the decisions of the 21st Party Congress and considering that the state plan for the development of the national economy of the USSR in 1959, the first year of the seven-year plan, is being successfully fulfilled, have adopted a decision on the schedule for completion of the transition to a shorter working day and the adjustment of the wages of workers and employees in various branches of the national economy and economic areas.

The decision notes that considerable work has been carried out in recent years in reducing the hours of workers and employees and in improving wage systems. In 1958 and 1959, following the example of the coal industry and ferrous metallurgy, the working day has been reduced to seven hours (six hours in the case of workers in the leading categories of underground jobs) and new wage scales have been introduced for workers and employees in nonferrous metallurgy, in the chemical and cement industries, in the production of reinforced-concrete products and structurals and in the mining of salt and ozocerite. Preparations are under way for reducing the working day and simultaneously adjusting the wages of workers and employees in the machine building, metalworking, oil and gas industries, beginning in 1959.

Reduction of the working day with a simultaneous adjustment of wages, first of all in the basic branches of heavy industry, has been a major factor in further advancing the socialist economy and improving the material and cultural standards of workers and employees. The workers have been furnished with a greater material interest in raising production and improving labor productivity; enterprises are coping better with the national economic plans; and even though the working day has been reduced, the earnings of workers and employees not only have been maintained but have risen substantially with the introduction of new and higher wage and salary scales. This is especially true of the low-paid workers and employees.

The Party Central Committee, the USSR Council of Ministers and the Central Council of Trade Unions have deemed it necessary to reduce to seven hours the working day of all workers and employees in the national economy, [illegible], and to six hours in the case of workers in the leading categories of underground jobs, according to the following schedule:

In industry in the North, the Far East, Siberia, the Urals, the Kazakh Republic, Moscow and Moscow Province, Leningrad and Leningrad Province, and Ivanovo Province - in the fourth quarter of 1959 through the fourth quarter of 1960, and in other economic

areas in the third and fourth quarters of 1960;

In construction and geological survey work in the North, the Far East, Siberia, the Urals and the Kazakh Republic - in the second quarter of 1960, and in other economic areas in the fourth quarter of 1960;

In transport and communications - in the fourth quarter of 1959 through the fourth quarter of 1960;

In state agricultural enterprises - in the fourth quarter of 1960;

In trade, public catering, procurement and material-and-technical supply enterprises and organizations, in educational, public health, cultural and art institutions, in the state apparatus and in other nonproduction enterprises, organizations and institutions - in the third and fourth quarters of 1960.

The wages of workers, engineers, technicians and employees in industry and construction will be adjusted simultaneously with the reduction in their working day.

The new wage scales for workers, engineers, technicians and employees at transport and communications enterprises, state farms, Repair and Technical Stations, auxiliary agricultural enterprises, scientific research institutions and design organizations will be introduced in 1960 and 1961.

The new wage scales for workers, engineers, technicians and employees of trade, public catering, procurement and material-and-technical-supply enterprises, educational, public health and art organizations and institutions, the state apparatus and other nonproduction fields will be introduced in 1962.

The decision approves new and higher base pay scales and grades for workers and salaries for engineers, technicians and employees.

Simultaneously with the adjustment of wage scales, minimum wages will be raised to 400-450 rubles a month, in accordance with the decision of the 21st Party Congress.

The USSR Council of Ministers' State Labor and Wages Committee, jointly with the Central Council of Trade Unions, has been instructed to approve standard regulations for piece-work-bonus and time-bonus systems; a standard list of jobs eligible for remuneration under the wage scales established for high-temperature and arduous jobs, for work under unhealthy conditions; and so forth.

In shifting workers to a shorter working day and new conditions of payment, the economic councils, ministries, agencies executive committees and enterprise officials must introduce on a wide scale technically sound output norms conforming to the present-day level of technology and production organization and to the increased production knowledge of the workers, must work out and introduce service norms for workers paid on an hourly basis, must apply economically effective wage scales for the workers and pay bonuses to workers for higher quality and better performance of their sections and shops and of enterprises as a whole, must increase the proportion of total wages represented by base wages, and must

rate jobs and establish categories for workers in accord with the wage-rate and qualification handbooks, subject to approval under the established procedure.

The Union-republic Councils of Ministers, USSR ministries and agencies, economic councils and province (territory) executive committees, in agreement with the respective trade union agencies, may set the specific time limits for reducing the working day and introducing the new wage scales for the workers and employees of individual enterprises, construction projects and organizations within the general time limits set by the decision.

Where production operations are continuous, and also in job categories in which the length of the work shift cannot be reduced, workers and employees must be given additional days off to compensate for overtime above the established working day.

The Party Central Committee, the USSR Council of Ministers and the Central Council of Trade Unions have pointed out to Party, government, economic and trade union organizations that enterprises must be prepared thoroughly and in good time for operating under the conditions of the shortened working day and that constant supervision must be exercised over the practical, on-the-spot implementation of this measure, bearing in mind that output plans and assignment for increased labor productivity must be fulfilled without fail. Technological, economic and organizational measures must be worked out and introduced for each enterprise. Particular attention must be paid to introducing new machinery and advanced technology in production, to the mechanization of production processes, to specialization and cooperation, to ensuring rhythmical operation of enterprises, to reducing losses of working time and to improving labor organization.

The Party Central Committee, the USSR Council of Ministers and the Central Council of Trade Unions have charged Party, government, trade union and Young Communist League organizations and the heads of ministries, agencies, enterprises, construction projects and organizations with developing explanatory work and ensuring the broad participation of workers, engineers, technicians and employees in drawing up and putting into effect measures connected with reducing the working day in the national economy and introducing the new wage systems. These measures will be an important stage in giving the USSR the world's shortest working day and shortest working week.

The Party Central Committee, the USSR Council of Ministers, and the Central Council of Trade Unions call upon workers, engineers, technicians and employees to raise still higher their labor activity and their creative initiative in discovering and making the fullest use of all latent production reserves so that the reduction of the working day at each enterprise and construction project may result in a new increase in output and a rise in labor productivity and thus in a further rise in the material and cultural standards of the working people.